

Department of Technology
Savitribai Phule Pune University

**Name of course - Post Graduate Diploma Clinical Research
Technology 2023-2024**

Syllabus for Entrance Examination

Part – A


General Aptitude

- Test of Reasoning
- Verbal Analogies
- Numerical Ability
- English Grammar
- Verbal Deductions
- Word Groups
- Structural Orientation

Section B:-

1. Basic Biology, Physics and Chemistry (General Science):- 12th based Zoology, Botany, Organic Chemistry, Inorganic Chemistry, and physical Chemistry. Structure and properties of water. Ion product of water. Buffers, pH, pK and pI. Basic concepts on Molarity, Molality and Normality. Mean, Mode, Median, Standard deviation, Standard error and probability.
2. Anatomy and Physiology- Scope of anatomy and physiology and basic terminology. Structure of cell, its components and their functions. Various systems of the Human Body
3. Microbiology, biochemistry, biotechnology- Structure and organization of microbial cells, Microbial growth and Transformation, Antimicrobial agents. Drug resistance. Enzymology. scope of microbiology, Microbial genetics and variation, Control of microbes by physical and chemical methods, Disinfection, antiseptics and Sterilization. Immunology. Metabolism: Carbohydrate, Lipids, amino acids and nucleotides. Glycolysis, TCA cycle, Urea cycle, Gluconeogenesis. Bio-molecules: Carbohydrates, Lipids, Proteins, Vitamins and nucleic acids. Cell biology.
4. Clinical Research & Ethics. Background, Definitions & Introduction of clinical research, PK/PD studies, Bioavailability, Bioequivalence. Indian regulations and ethics in clinical research. Informed consent process and human subject protection, Adverse events in clinical trials




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